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METHOD FOR PRODUCING LATERAL EJECTION APPARATTH FOR HELICOPTER OR PLANE

BACKGROUND OF THE INVENTION

Field of the invention

The new invention relates to the method and devices of aircraft or theoretically, objects in motion, specifically improvements and advantages, which, allow for the first time all occupants of helicopters and planes to eject laterally and safely from a helicopter or plane.

Description of prior art

Until now the failing has been that occupant ejection was possible only on a horizontal and even longitude as in military fighter jets, leaving many thousands of individuals and parties without access to a timely means of emergency exit in event of a helicopter or plane failure. Longitudinal ejection cannot provide for equal access to an emergency exit, because aircraft are built along a longitude, creating larger surface areas along right and left latitudes as the single reasonable and safe area for emergency exits of equal access in a commercial airliner. All ejection devices until now are void of the ability to laterally eject a commercial aircraft or helicopter aircraft occupant to safety.

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SUMMARY OF THE INVENTION

The method of lateral ejection, which apparatus are produced by arranging any set of tracks or guide rails perpendicular to a horizontal longitude of an aircraft fuselage, and using a rocket catapult, emergency door, multiple altitude appropriate parachutes, and body positioners and protection airbags. Subsequently, a weight of an aircraft occupant is now placed directly on load bearing triple monorails being employed for the first time. The extent to which the lateral ejection aerodynamic tool re-orders design throughout a range of fields defining aerodynamics is not limited to but can be defined as affecting Pat. Nos. cited in the references, which will have to under go moderate structural changes, so that in years time, most of the international air fleet will possess lateral ejection equal access total occupant timely emergency exit access. Moreover the lateral ejection tool is sightable by utilizing an aiming mechanism directed by a mechanized gear console handle and swing arm barrel sight seat swivel; when existing fuselage area allows; actuated by cylindrical telescoping hydraulic arms capable of realizing near perfect, or, perfect theoretical, lateral ejection respective of the real time forward motion (pressure) of a failed aircraft, by targeting preferred seat trajectories towards any quadrant within a sphere when right and left bipolar seat pairs are configured in a combat or high performance helicopter or plane; if said aiming mechanism operates independent of a robotic arm, which costs would perhaps become prohibitive except in luxury aircraft or military designs in an exemplary embodiment. An aiming mechanism can work by pushing and pulling the lateral ejection mechanism with attached seat chassis, swinging from a center console containing a blast shield and a swivel plate on which triple monorails and a seat are mounted. Practically, lateral triple monorails may be mounted by bolts and welding to any seat portal and sighted to eject 90 degrees perpendicular to a horizontal longitudinal axis, or, sighted along a preferred angle in order to avoid a failed aircraft roll; in accordance with the spirit of the lateral ejection objectives; again, depending upon area limitations imposed by existing aircraft occupancy design, a 90 degrees, right-angle can be a common sighting, and is shown here in the abstract and drawings installed in a fuselage, sighted at 90 degrees with bottom mounted tail fins

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turned aft of the aircraft occupancy. Multiple altitude appropriate parachutes are added to each seat chassis to advantage with this invention. Therefore, I have invented a method and stable mechanism by which accordingly all aircraft occupants of helicopters or planes are ejectable. The method of lateral ejection, which apparatus is produced by arranging any set of tracks or guide rails perpendicular to a horizontal longitude of an aircraft fuselage, here a set of load bearing triple monorail tracks with circumventing roller trucks often associated with skateboarding wheel "trucks", arranged laterally on a right angle to each other, along a bottom underside and back of an aircraft occupant accommodation, also known as a seat chassis. A seat chassis embodiment features a pair of circumventing roller trucks guided monorail tracks and movable track box attached to a bottom underside of said chassis' with a third monorail with circumventing roller trucks along which a movable track box also slides is attached to a back of a chassis' and at a right angle to two bottom monorails. Circumventing roller trucks insure stable ejection pitches during foreseen catastrophic rolls, spins or spin and roll movements, impacts and collisions of a failed aircraft; and importantly allow for separation of a track system during track metallic expansion and separation failure during an onboard fire. Additionally, the lateral ejection apparatus affixes to any aircraft seat or seat platform by means of an integrated construction system mold constituting flange and drillable top outer surface of a monorails movable outer track box. A seat chassis and movable outer track box are prevented from moving along wheel trucks of said stationary inner monorails by rocket catapult secured to a protective blast shield. This connection between catapult and a blast shield, secures a seat chassis in position on tracks until when a catapult burst connection seals upon ignition. Deployable head, neck and chest airbags along both sides of a seat chassis and for positioning legs and torso for safe ejection are necessary to the invention. A rocket propelled greater sliding door panel with an interior fixed conventional hinge door has a pair of adequate pneumatic devices at a top and bottom section with catches to prevent a sliding door panel from recoiling into a path of an ejecting seat chassis. At least three cylindrical compartments contain three altitude appropriate parachutes with a hermetically sealed sensor fuse box. A sliding door is configured to open only during an emergency ejection sequence, while an interior fixed conventional hinge type door inside a sliding emergency door is an operational door for use by pilots or occupants.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a transparent side view of an aircraft occupancy, with lateral ejection components triple monorails, mounted on supporting track launcher platform legs in which bottom mounted tail fins are slotted.

FIG. 2 is a side view of an aircraft occupancy, with a closed fixed emergency greater sliding door panel, and interior operational conventional hinge door.

FIG. 3 is a side view of the aircraft occupancy, and a fixed emergency greater sliding door panel with interior operational conventional hinge door transversing the aircraft fuselage by means of pneumatic rockets.

FIG. 4 is a side view of a path of the laterally ejecting movable outer track box with attached seat chassis, after ejecting from an aircraft occupancy.

FIG. 5 is a side view of the laterally ejected devices initiating parachute extraction by means of standard drogue chute extraction, after clearing the tail of an aircraft.

FIG. 6 is a side view of a triple monorail track and a launcher platform.

FIG. 7 is a side view of a movable outer track box to which any seat chassis can be mounted and is movable along inner tracks and supporting tracks.

FIG. 8 is a side view of triple monorails after a movable outer track box has been ejected, revealing a blast shield and catapult rocket base seals on a blast shield.

FIG. 9 is an anterior side perspective view of triple monorails, showing a blast shield, and three monorail track support columns.

FIG. 10 is a transparent top, side or bottom view of a back monorail track.

FIG. 11 is a transparent top, side or bottom view of one of two bottom positioned monorail tracks.

FIG. 12 is top view of a supporting track roller trucks configuration.

FIG. 13 is a top view of a corner elbow supporting track.

FIG. 14 is a top view of an aircraft seat with three parachute cylinders.

FIG. 15 is a top transparent view of a hermetically sealed altitude appropriate parachute ignition fuse box.

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DETAILED DESCRIPTION OF THE INVENTION AND DRAWINGS

FIG. 1 shows an aircraft occupancy, a fuselage **37**, which is fitted with reinforcing aircraft fuselage struts and supports **47, 48, 49, 50**, slender glass panes **51, and 52**, fitted between reinforcing fuselage struts and supports, around an emergency door and fuselage structure, and two triple monorail ejection devices **FIG. 6**, on each side of an aircraft one behind another. **FIG. 1** is a transparent side view of an aircraft occupancy, with lateral ejection components, **FIG 6**, triple monorails, mounted on supporting track launcher platform legs **9**, in which bottom tail fins are slotted. A fuselage has a set of sliding door **34**, tracks **30,31**, an interior operational conventional hinge door **33**, and an exterior sliding door arm **32**, located near a lower right corner of a sliding emergency greater door panel. Catches **46**, to prevent recoiling of a sliding greater door panel.

FIG. 2 is a side view of an aircraft occupancy, with a closed fixed emergency greater sliding door panel **34**, and interior operational conventional hinge door **33**.

FIG. 3 is a side view of an aircraft occupancy **37**, and fixed emergency greater sliding door panel **34**, with interior operational conventional hinge door transversing an aircraft fuselage by means of pneumatic rockets **35, 36**. **FIG. 3** also shows a seat chassis **38**, as it is fitted onto triple monorail ejection devices **FIG. 6**, during the lateral ejection sequence when airbags **40, 41**, and seat chassis, right side airbag **42**, open simultaneous with pneumatic rockets **35, 36** transversing a emergency greater sliding door panel to a rear of an fuselage.

FIG. 4 is a side view of a path of the laterally ejecting outer track box **5**, with attached seat chassis **38**, after ejecting from an aircraft occupancy, and guided towards clearing a tail of an aircraft by tail fins **11**. Left side head, neck, and chest protector airbag **43**, is shown with a right side airbag concealed behind it **42**.

FIG. 5 is a side view of the laterally ejected devices initiating parachute extraction by means of drogue chute **39**, extraction, after having cleared a tail of an aircraft. Similarly, to **FIG. 4**, **FIG. 5** identifies a left side airbag **43**.

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FIG. 6 is a side view of a main triple monorail components of a triple monorail lateral ejection method, comprising two bottom monorails **1**, and one monorail positioned at a right angle **2**, to two bottom monorails. Each monorail consists of wheel truck axel bases **3**, and truck rollers **4**. Monorails surrounded by an outer track box **5**, which is movable laterally along said triple monorails, and to which any seat may be attached by means of a flange **44**, located at a top interior corner of a movable outer track box, and/or by a drillable surface **45**, at a center of a lower top section of a movable outer track box. When bolting or welding at a drillable area **45**, one must leave room for rocket catapults **6, 7** housed in an area between bottom monorails and directly below a drillable surface area **45**. **FIG. 6** clearly shows a support track **8**, including a corner elbow section **12**, and track end knobs **14**, along with a mesh end cover **13**, depicted partially and in transparency. The device further is supported on launcher platform legs **9**, a blast shield **10**, seen partially in **FIG. 6**, and divided such that two bottom mounted tail fins **11**, are slotted between platform legs. A area of circumference **B**, designates an angle theta , being a distance between launcher platform legs in which tail fins are slotted as a maximum angle theta, tail fins may exit leg hole slots in which they are slotted. A hermetically sealed sensor fuse box **24**, is attached by a rip cord to both a movable outer track box and a blast shield. A rip cord **26**, **FIG. 15**, opens a hermetic seal of said sensor fuse box upon separation of a movable outer track box from an aircraft fuselage during lateral ejection.

FIG. 7 is a side view of a movable outer track box **5**, to which any chassis can be mounted and is movable along inner tracks and supporting tracks. A corner elbow right angle connector **12**, which attaches a lower portion of a movable outer track box to an upper portion of a movable outer track box is a standard elbow coupling device of triangular right angle construction. Two tail fins can be seen in **FIG 7**, in their unslotted posture, while rocket catapults **6, 7**, are concealed behind a track mesh end cover. **24**, **FIG. 7**, shows a sensor fuse box as attached to a movable outer track box.

FIG. 8 is a side view of the triple monorails after a movable outer track box has been ejected, revealing an upper portion of a blast shield **15**, and catapult rocket base seals or rocket nozzle locks **16, 17** on a blast shield, and which base seals prevent a movable outer track box from moving or sliding on either a monorail inner tracks **1,2**, or support track **8**. These two seals or rocket nozzle

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locks 16, 17 are a locking mechanism which prevent a movable outer track box from moving prior to ejection, and which seals are burst do to ignition of rocket catapult and combustion expansion within said base seal which sheer this only locking connection between a launcher platform base and a movable outer track box.

FIG. 9 is an interior side perspective view of said triple monorails, showing a blast shield 15, and three monorail track support columns 21, 22, 23. A back reinforcing panel 46, of a launcher platform.

FIG. 10 is a transparent back view of a back monorail track 2, and a cross sectional piece of a blast shield 15, and roller truck wheel bases 3, supporting roller truck wheels 4. **FIG. 10**, line C is a back side view of a back monorail track support column, and 21, **FIG. 10**, said same support column 21, as it appears next to a back reinforcing panel of a launcher platform 46.

FIG. 11 is a transparent top, side or bottom view of one of two bottom positioned monorail tracks 1, and a cross sectional piece of a blast shield 15, with a cross sectional mesh end cover 13, roller truck wheel bases 3, and roller truck wheels 4. Line A-A corresponds with line A-A of **FIG. 14**, and represents a positioning of a monorail lower front monorail track beneath a knee and thigh of a seat chassis occupant. 23 is a top view cross sectional piece of a bottom monorail track support column.

FIG. 12 is top view of a supporting track 8, roller trucks configuration 3, 4, which is identical to roller trucks 3, 4, design used on a stationary inner monorail tracks 1. Also shown is a joining abutment between a blast shield 15, and support track 8. **FIG. 12, 23** shows how a support column 23, intersects an interior portion of a supporting track roller truck arrangement, aligned perpendicular to a horizontal longitude of a blast shield 15.

FIG. 13 is a top view of a corner elbow 12, supporting track 8, roller trucks configuration 3, 4, and a track mesh end cover 13.

FIG. 14 is a top view of an aircraft seat with three parachute cylinders 18, 19, 20, along a back of a seat chassis. Line A-A is a position of a monorail track shown in **FIG. 11**, beneath a knee

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and thigh of a seat chassis occupant. 21, 22, 23, are top views of an inner monorail tracks support columns.

FIG. 15 is a top transparent view of a hermetically sealed 25, altitude appropriate parachute ignition fuse 28, box 24, which is connected to a blast shield 15, by a rip cord 26, and rip cord base 27, said rip cord pulling a hermetic seal 25, from said fuse box 24, upon ejection of a movable outer track box from an aircraft to which a fuse box can be attached on a top outer portion of a back portion of a movable outer track box. An ignition wire 29, for three altitude appropriate parachutes 18, 19, 20.